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C-A OPERATIONS PROCEDURES MANUAL

1.14 General Requirements for Liquid Storage and Outdoor Storage

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Hand Processed Changes

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Approved: *Signature on File* _____
 Collider-Accelerator Department Chairman Date

M. Van Essendelft

1.14 General Requirements for Liquid Storage and Outdoor Storage

1. Purpose

This procedure describes the C-A Department's policy for managing departmental storage tanks, portable containers, bulk storage areas and outdoor work storage areas in accordance with the [SBMS Storage and Transfer of Hazardous and Nonhazardous Materials Subject Area](#).

2. Responsibilities

- 2.1 The C-A ESHQ Division Head shall ensure that the Department operates within the requirements specified in SBMS subject area pertaining to the Storage and Transfer of Hazardous and Nonhazardous Materials.
- 2.2 The Environmental Compliance Representative (ECR) shall note potential compliance deficiencies, when observed, and raise them to the attention of the ESHQ Division Head.
- 2.3 The ECR shall provide expert advice on environmental regulatory compliance questions and propose solutions to compliance problems.
- 2.4 The ECR shall act as a liaison between the C-A Department and the Environmental Services Division.
- 2.5 All C-A personnel shall immediately make notifications of unintentional releases from storage containers according to the SBMS Spill Response Subject Area.

3. Prerequisites

None

4. Precautions

None

5. Procedures

- 5.1 General requirements for C-A liquid storage tanks, bulk storage containers, and large volume piping systems.
 - 5.1.1 The ECR, in conjunction with the Environmental Services Division Subject Matter Expert, shall evaluate additions, deletions, modifications, to storage containers during early project planning stages. Tanks and storage systems shall be documented, as appropriate, in the Supplemental Facility Environmental Information Table 4.1.5, located on the ESD website.

- 5.1.2 The Department shall conduct monthly inspections of storage Tanks, Portable Containers, and Bulk Material Storage Areas. These inspections shall be documented using [C-A-OPM-ATT 1.14.a](#).
- 5.1.3 The Department shall conduct quarterly inspections of Outdoor Storage/Work Areas as part of the Tier I program. These inspections shall be documented using [C-A-OPM-ATT 1.14.b](#).
- 5.1.4 Storage systems within the C-A complex used for cooling water transfer that do not have large dedicated storage tanks shall be inspected through the monitoring systems currently in place with the Water Systems Group. Electronic and paper copies of the system monitoring shall be maintained by the Water Systems Group. [C-A-OPM-ATT 1.14.c](#) lists the systems, tanks and groups responsible for inspections.
- 5.1.5 The Department shall conduct tightness testing of storage containers according to the frequency specified in the Storage and Transfer of Hazardous Materials Subject Area.
- 5.1.6 The Department shall maintain inspection records of liquid storage containers, noting the details specified in the Storage and Transfer of Hazardous Materials Subject Area.

5.2 Cooling Water System drainage and handling.

- 5.2.1 Radioactive water drained or collected from the various radioactive cooling water systems shall be transferred to one of three 7,000 gallon tanker trailers.
- 5.2.2 Water System technicians shall monitor system draining and filling to assure that spill and/or overfills do not occur.
- 5.2.3 Water System technicians shall remove the “Empty” sign from the tanker when water is placed in the tanker and they shall assure that secondary containment is in place when the tankers are in their normal storage area and have water in them.
- 5.2.4 During months where the possibility of a freezing condition exists and the tanker(s) contain water, steam or electric heat shall be supplied to the tanker(s).
- 5.2.5 Periodically the emissions shall be assessed by ECR against NESHAPS requirements to assure that radiation dose rates are below levels that require continuous monitoring.

- 5.2.6 When tankers are drained to refill systems or when tankers become empty, Water System technicians shall remove the secondary containment barriers and place an “Empty” sign on the tanker.
- 5.2.7 Water System technicians shall maintain a record of Tanker Operations by using [C-A-OPM-ATT 1.14.d](#).

6. Documentation

- 6.1 C-A Monthly Inspection Checklist for Storage Tanks/Portable Containers/Bulk Storage
- 6.2 C-A Quarterly Inspection Checklist for Outdoor Storage/Work Areas
- 6.3 Water System Group’s Monitoring Records
- 6.4 Tanker Operations Log

7. References

- 7.1 [SBMS Storage and Transfer of Hazardous and Nonhazardous Materials Subject Area](#).

8. Attachments

- 8.1 [C-A-OPM-ATT 1.14.a](#) “Monthly Inspection Checklist for Storage Tanks/Portable Containers Bulk/Storage”.
- 8.2 [C-A-OPM-ATT 1.14.b](#) “Quarterly Inspection Checklist for Outdoor Storage/Work Areas”.
- 8.3 [C-A-OPM-ATT 1.14.c](#) “List of C-A Inspection Areas for Liquid and Outdoor Storage”.
- 8.4 [C-A-OPM-ATT 1.14.d](#) “Tanker Operations Log”.